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Psychosexual Development, Maternalism, Nonpromiscuity, and Body Image in 15 Females with Precocious Puberty

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Fifteen females with a history of idiopathic sexual precocity were selected without known sampling bias. They had been followed for as long as 18 years. They showed various behavioral characteristics as a group, but were also individually unique. If the IQ permitted, they benefited socially from school acceleration. Left to their own devices, the majority preferred friends nearer to them in physique age rather than chronologic age. Play interests, though influenced by the age of playmates, showed no features unique to the precocious onset of hormonal puberty. About half of the girls had occasional moody or depressed spells and wanted to be left alone. Maternalistic interests were strongly represented; only one girl was a tomboy. Masturbation and sexual play in childhood were rarely confirmed, and in no instances were totally contrary to family or community mores. No consistent progression of erotic dream content was discerned. Dreams of having a baby were rare, but antedated intercourse dreams, which were also rarely reported and did not include sensations of climax. Whereas the youngest age of having a serious boyfriend was 8 years, and the youngest age of intercourse, 11, the majority of girls did not report romantic and sexual involvements before the middle teenage years or later. In the three instances of marriage, the youngest was at age 21. Motherhood has so far been achieved by only one patient. She delivered her first child at age 11. The visible appearance of early sexual development and early advanced statural growth created a problem in childhood human relationships for most of the girls, regardless of what they said, and regardless of their skill or ineptitude in handling it. They all benefited even from minimal counseling, as did their parents. Early appearance of physical sexual development does not automatically lead to premature engagement in erotic activity or promiscuous sexual behavior. Such activity and behavior require appropriate experience and facilitating knowledge of erotic opportunities.

INTRODUCTION

By clinical convention, the onset of menses at age 13 (range 11–15 years) is

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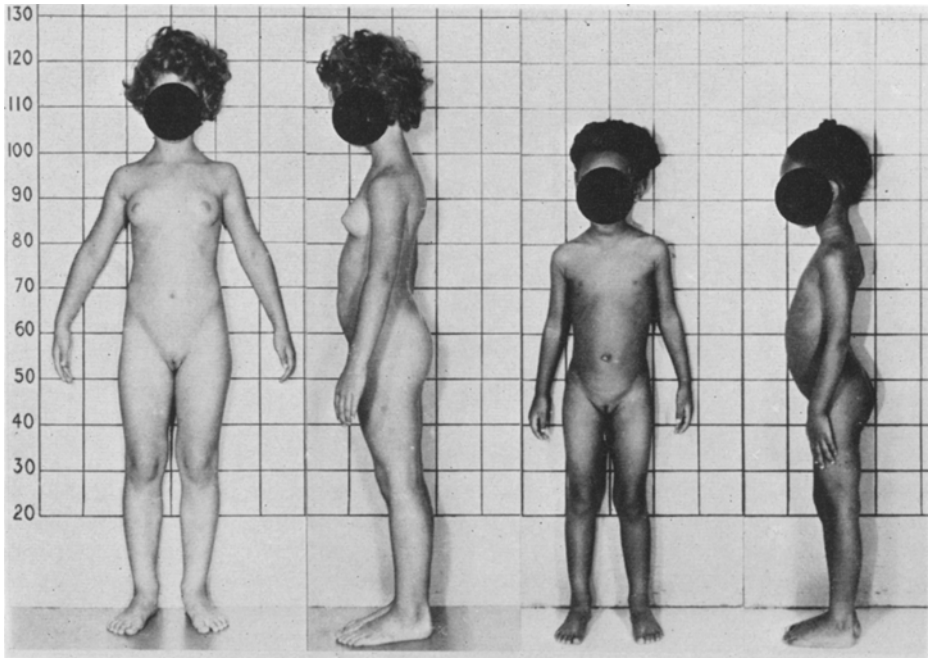

Fig. 1. Comparison of two girls of similar age with and without pubertal precocity. Left: Chronological age, 4 7/12; height age, 7 9/12; bone age, 8 6/12. Right: Chronological age, 4 1/12; height age, 4 6/12; bone age, normal.

regarded as typical or normal. Menstruation at age 10 (range 9 to 10 11/12 years) is early, and menstrual onset prior to age 9 is regarded as precocious. Precocious menstruation is usually the final sign of precocious puberty. It follows the first sign, usually breast enlargement, by an average of about 2 years. Precocious puberty in a girl is typically a pathology of timing only, and, if so, is diagnosed as idiopathic: the girl, as in the case of all of the girls in the present sample, is early in her sexual development, but otherwise healthy. For other etiologies of precocious puberty see Wilkins (1965) and Gardner (1969).

The young precocious female, with her breasts, pubic hair, monthly menses, and advanced bone age, has, during the middle and late childhood years, a physique age well in advance of her chronologic age (see Fig. 1). For several years she lives in a no-man's land between her age mates, who are physically immature, and her physique mates, who are more socially advanced. Eventually, her age mates attain puberty, catch up with her in physical development, and even surpass her in stature owing to her relative shortness consequent to the premature fusion of her epiphyses. After having been oversized in the early years, the precocious child has an adult height between an approximate lower limit of 4 ft 10 inches and an upper limit of 5 ft 4 inches. Adult height is attained typically between the ages of 10 and 12 years. Weight is usually commensurate with height, except for the occasional overweight that one might find in any teenager not watching her diet.

Until the present decade there was no pharmacological treatment for precocious girls. The most that could be offered was psychological counseling, including sex education and attempts to have schooling accelerated. Since 1960, it has become common to use Provera® (medroxyprogesterone acetate) to suppress the secondary sexual characteristics of breasts and pubic and axillary hair and to delay the onset of menses. The drug has no effect on the advancement of statural growth, however. It may also delay the establishment of regularity of menstrual cycles, when the girl is older and the drug is discontinued.

The psychologic aspect of the idiopathic type of physical precocity has rarely been studied or reported upon, though there are occasional case studies in the literature (for example, Lloyd, Lobotsky, and Morley, 1950; Hampson and Money, 1955; McGeorge and Conner, 1961; Conner and McGeorge, 1965). Money and Alexander (1969) published a companion paper to the present one, concerning precocious puberty in males.

The purpose of this paper is to report data on the psychosexual, psychosocial, and sexual-behavior concomitants of female sexual precocity in fifteen cases.

SAMPLE SELECTION

Of the forty-two cases of idiopathic sexual precocity (female) on file in the psychohormonal research unit at The Johns Hopkins Hospital, fifteen were chosen for this study according to the criteria listed below. All of these cases were routinely referred from the pediatric endocrine clinic of the Johns Hopkins Hospital by Robert M. Blizzard, M.D., and the late Lawson Wilkins, M.D. Virtually every case seen in pediatric endocrinology was seen also in our unit. When cases were missed it was because of limitations of time and personnel. No discernible systematic bias resuted from these few exclusions. Criteria for subject selection were as follows: sexual maturation, including the onset of menses, before the ninth birthday[4]; the girl was 10 years of age or older at the time of the last interview or contact; and the girl was seen or contacted on at least two occasions spread over at least one full year of follow-up study.

Sixteen cases met the set criteria, of which one case was excluded because of the possible effect on psychological development of severe lateral curvature of the spine (scoliosis). Table I provides summary information on the subjects reported upon. The median age of the first sign of breasts was 6 (range birth to 7) years, and the median age of onset of menses was 8 6/12 (range 7 1/12 to 9 6/12) years. The median follow-up period was 9 4/12 (range 1 5/12 to 18 1/12) years. Six of the patients had been administered Provera® at some point during childhood.

PROCEDURE

Patients, one or both parents, and sometimes siblings, were seen by varied

[4] One girl included in the sample was 9 6/12 years of age at the onset of menses, having been therapeutically delayed by the use of Provera.® Additionally, one other girl experienced the onset of menses at age 9 3/12 years. Provera® was not used in this case. She was included in this sample because other pubertal signs were quite evident earlier and because follow-up study had been maintained for over 14 years.

Table I. Chronologic Data Relevant to Precocity Onset and Psychologic Evaluation ($N = 15$)

	Age in years		Psychologic evaluation		
Patient's initials	First sign of breasts	Onset of menses	Age first seen	Age last seen	Years of follow-up
JP	5	8 6/12[d]	8 10/12	10 3/12	1 5/12
HL[a]	7	8 6/12	11 7/12	13 4/12	1 9/12
FM[b]	4	8 6/12	5 1/12	21 3/12	16 2/12
CL	6 6/12	8 8/12	8 5/12	10 3/12	1 10/12
CW	6	8 6/12[d]	8 9/12	11 7/12	2 10/12
HP[a]	Birth	9 3/12	8 4/12	22 9/12	14 5/12
YL	6	7 9/12[d]	9 10/12	11 9/12	1 11/12
WL[c]	6 6/12	8 6/12	5 11/12	22 4/12	16 5/12
WD[c]	5 6/12	7 1/12	6 7/12	24 8/12	18 1/12
BB	2 10/12	8 6/12[d]	3 10/12	15 4/12	11 6/12
BR	6	7 4/12	7 10/12	25 2/12	17 4/12
MI	3	9 6/12[d]	4 8/12	11 7/12	6 11/12
OJ	6	7 2/12	6 8/12	16 0/12	9 4/12
RB	1	7 1/12[d]	7 1/12	14 4/12	7 3/12
HD	6 6/12	8 3/12	8 11/12	23 4/12	14 5/12

[a] HL and HP each have a precocious sister not included in this sample.
[b] FM has a maternal grandmother who possibly was precocious.
[c] WL and WD are sisters and have a precocious brother.
[d] Provera® was used for varying time spans.

personnel in the psychohormonal research unit between 1951 and 1970. Interviews focused on psychosexual development and behavior, school progress, and peer relations. Most interviews were taped in whole or in summary and later transcribed. A four-page, open-ended, follow-up questionnaire was completed in 1969–70 by thirteen of the patients or their parents, for this study. Long-distance telephone calls and personal interviews were used to bring as many cases as possible up to date. From the completed case files, information was extracted and entered upon flow charts under a set of preselected headings. These headings appear below in the section "Findings." If any ambiguity occurred regarding the classification of a subject, members of the research group were consulted until a consensus was achieved. In general, when no information was recorded for a patient on any given topic, it was because the girl lived too far away from the hospital to visit at the period of life when the information was a relevant topic of concern. "No information" categories are therefore not the result of neglect in data collection, but rather the product of the nature of clinical research.

FINDINGS

School Achievement

As a matter of general policy, attempts were made to accelerate the schooling of the girls, IQ permitting (see Money and Neill, 1967). School acceleration reduces the

Table II. School Achievement ($N = 15$)[a]

Not accelerated ($N = 7$)	Enriched program ($N = 1$)	Accelerated ($N = 7$)
RB, 14 4/12, 8th grade, B average	HP, 22 9/12, college graduate, B's and C's, high school valedictorian	MI, 11 7/12, 6th grade, all B's
CW, 11 7/12, 5th grade, failed one year		WL, 22 4/12, college graduate, B average
JP, 10 3/12, 4th grade, B+ average		OJ, 16 0/12, 11th grade, "good"
HL, 13 4/12, 7th grade, failed one year, truancy		BB, 15 4/12, high school graduate, "good grades"
YL, 11 9/12, 5th grade, A average		CL, 10 3/12, 5th grade, B average
BR, 25 2/12, junior college graduate, B average		HD, 23 4/12, college graduate, "good grades"
FM, 21 3/12, 7th grade, dropped out of night-school combination of 8th and 9th grades		WD, 24 8/12, college graduate, B+ average

[a] Patients listed by initials, with age last seen, highest school grade completed, and rating achieved.

period of age–physique discrepancy spent by the girl until her schoolmates catch up in development. Table II presents summary data on school performance. Seven of the fifteen girls were accelerated in school by from ½ to 2 years. All maintained satisfactory academic records or better, with three having graduated from college at the time of this report. One other girl was placed in an enriched program within her own age-grade level. She was valedictorian of her high school class and has graduated from college. Of the seven girls experiencing no school acceleration or advancement, four performed satisfactorily with one having graduated from junior college, but three girls had difficulty. One of these three (IQ 89) failed fifth grade; this girl had the lowest IQ in the series, and also a history until age 11 of an hallucinatory voice telling her to steal food and money. Another of these three (IQ 110) is the one girl who became pregnant; she dropped out of a night-school program combining eighth and ninth grades. The third

Table III. IQ Data[a] ($N = 13$)[b]

	Verbal	Performance	Full scale
Mean	116.07	107.69	113.23
Standard deviation	15.71	8.76	12.51
Range	87–143	93–119	89–133

[a] Data include WISC and WAIS scores. In two cases of serial testing, the most recent scores obtained were used.
[b] IQs were not obtained in two of the fifteen cases.

girl (IQ not obtained) failed seventh grade; she was an underachiever primarily because of truancy that was partly covered up, with alibis, by her family.

IQ Data

Table III provides a summary of the group IQ data. Money and Meredith (1967), in a larger sample of female precocity, of which the present group is a subsample, noted a discrepancy between Verbal and Performance IQ, along with a general elevation of Full IQ. This discrepancy may be attributed to accelerated social exposure and experience. In the present subsample, there is a somewhat greater mean Verbal–Performance discrepancy and higher mean Full IQ than in the larger sample—which can be attributed to a chance factor in sampling.

Friendship Choices

Table IV presents summary data on several aspects of social development. In ten of the fifteen cases, friends were chosen from among the physique peers rather than from the age peers. The friends, almost without exception always female, were from 2 to 5 years older than the precocious child. In the five remaining cases, one child could think of no close friends, three named children of the same age, and one named children 3 to 5 years younger than herself. Only one of these last five girls had been accelerated in school. All three of the girls naming same-age peers as close friends stated, and their parents concurred, that no or few older children were available in the neighborhood, but all sought older children when available. One of these three girls, last contacted at the age of 25 2/12, named close friends with ages ranging from 30 to 80. It appeared that even without school acceleration the children themselves tended to foster social precocity by fraternizing with older persons when possible. The behavior of the one girl who chose younger children as friends will be discussed in the section on maternalism below.

Varieties of Play

Spontaneous remarks, as well as responses to direct and indirect inquiry, provided information regarding the playtime activities of the girls (Table IV). Expressions such as

Table IV. Friendship, Play, and Mood ($N = 15$)

Age of friends		General moods	
Older	10	Happy, quiet	6
Same age	3	Depressed, cranky	6
Younger	1	Erratic	1
No friends	1	No information	2
Varieties of play		Episodic solitude	
Active outdoors	5	Wants to be alone	5
Sedentary	8	Hates to be alone	1[a]
Mixed	1	No information	9
No information	1		

[a] At age 21 3/12, this girl reported episodic wishes for solitude.

quiet, passive, indoors, observer and/or follower (sedentary play) were used in eight cases either by the girl herself, the parents, or schoolteachers. Loud, active, outdoors, and/or leader were used to describe five of the girls. The list of favorite activities given by one girl and her mother indicated a wide variety of interests across the active–passive dimension. No information was available for one other girl. Dolls, bike riding, playing house, and playing baseball were all quite popular. Sexual precocity apparently had no discernible effect on the girls in inhibiting the pursuit of play and amusement, even though it may have influenced their choice of older playmates.

Moods

Information regarding general mood states (Table IV) was unavailable for two of the girls. One girl, at the age of 22 9/12, described her moods as erratic—"smile one minute, cut your throat the next." This same girl reported that she was "quite moody" when younger. Six of the girls were described either by themselves or their parents as quiet or happy while the remaining six were described as cranky, grouchy, or depressed. Two of the latter group of girls were supposedly cranky only at the time of, or just prior to, their monthly periods, according to their mothers. In five cases, spontaneous remarks were made regarding the girls' wishes to be left completely alone at times, with activities confined to their rooms, and no intrusions tolerated. One girl, at age 16 3/12, stated that she was "blue" only if left alone, but when last seen at age 21 3/12 she too reported episodic wishes for solitude. Considering the number of girls depicted as depressed, cranky, or needing to be left alone at times, it may be assumed that the disparity between chronologic age and physique age does exact a toll, but perhaps not more so than other pressures to which matched controls might be exposed. Of the six girls over the age of 20 years at the time of last contact, all reported some periodic depression. One of these girls had a history of depression severe enough to require therapy. One other girl, at age 15, was treated for an overdose of phenobarbital. This apparent suicide attempt occurred 2 months after the birth and giving away of her third child in adoption.

Femininity and Maternalism

Only one girl gave evidence of high energy output of such a type that, in later childhood, she proudly proclaimed herself to be a tomboy (Table V). Climbing trees, playing baseball, and doing "things that boys do" were her idea of fun. This girl's case was perhaps the most unusual one included in this study. Compulsive water

Table V. Childhood Femininity and Maternalism ($N = 15$)

Maternalistic behavior	11
Dislikes little kids	1
Tomboy	1
No information	2

drinking and nocturnal screaming spells (conjectured by her endocrinologist as due to masturbation) were included in her earlier history. She was not accelerated at school. Her grades were satisfactory on the criterion of age (IQ not obtained). She was among the few girls who chose some of her friends at her own age level, and among the few girls who named a boy (or in this case boys) as included under "close friends." Most of the remaining fourteen girls had evidenced typical, if not somewhat exaggerated, childhood feminine interest in dolls, as in playing house. Information as provided by two of the girls evidenced neither tomboy nor masculine behavior, nor any specific interest or activity which could be termed highly feminine or highly maternalistic. One other girl, at age 7, who preferred bike riding and children of her own age, complained that younger children "always get lost and I have to go find them."

The variety of interests and ambitions which could be classified as feminine or highly maternalistic, or both, expressed by eleven of the girls, was too diversified to permit tabular presentation. Of these eleven girls, three expressed a desire to become nurses (one of them already has served as a nurses' aide). Another girl, now at the age of 23 4/12, is working in youth education. Babysitting, mothering dolls, playing with younger children, and, as previously noted, having much younger children as best friends were severally identified as primary interests by five girls. One other girl led a group of neighborhood children in forming a club to teach manners and safety habits to the younger children. The eleventh girl in this group, who had named playing mother and house as her primary interests, suggested to her mother that a neighborhood child, ill with "bowel trouble" be told of her own precocity, in the expectation that the other girl would feel better knowing that someone else had been to the doctor. By contrast, most of the girls preferred not having their precocity made known to others, unnecessarily. All in all, maternalistic concern for babies and young children was well represented in the group as a whole, judging by the frequency and strength of its spontaneous report.

Masturbation and Childhood Sex Play

As may be seen in Table VI, nine girls reported absence of masturbatory activity, three reported some masturbation, and information was unavailable in three cases. One girl who admitted masturbating said she had done it only once, stopping for fear of parental punishment. Another, the girl previously mentioned who experienced infantile nocturnal screaming spells, later admitted that she sometimes masturbated. A third girl reported that masturbation was only very infrequent and consisted of

Table VI. Early Sex Behavior ($N = 15$)

	Masturbation	Other childhood sex play
Behavior confirmed	3	4
Behavior denied	9	1
No information	3	10

scratching in association with vaginal sensations. One of the nonmasturbators reported that she was tempted to masturbate, but never did. The youngest age at which a girl reported masturbation was 7 2/12 years.

Tolerance and intolerance seemed to polarize around intercourse, genital exposure, and petting as well as masturbation. These activities were most commonly regarded with disgust and considered nasty or, as one girl put it, okay for others, "if they really want to." Exposure in childhood sex play was admitted to in four cases. One girl, at age 5, had a boy pull her pants down and "get close" to her. She stopped him, thinking it "was not nice." One other girl, at age 6, pulled her pants down in front of a neighbor. The third girl, at age 7 2/12, along with a few male and female friends, witnessed a married couple performing intercourse on a screened-in porch. After seeing this, several of the children, including this girl, pulled their pants down for a few minutes and played at body contact. The fourth girl, at age 11 1/12, gave indications, unelaborated, that she may have touched another girl's vagina. One can conclude that frequency of childhood sex play was unaffected by physical precocity, although, in the case of masturbation, the age of onset may have been slightly lowered in some cases. Parental fears of excessive or uncontrolled sexual behavior were not borne out. Normal childhood sexual curiosity occurred, more or less consistent with age, with precocity of physique apparently irrelevant.

Romantic and Erotic Imagery and Dreams

Sample dream reports were available from all but three of the girls. Twelve girls reported dreams of devils, witches, or monsters as the earliest ones remembered. Dreams in which boys appeared were subsequently reported. At the same time, boys also appeared in daytime fantasies. The first reported dream of having a baby (delivery) was recorded for one girl at the age of 6 6/12 (Table VII). This dream occurred one evening when she was suffering from a stomach ache which had persisted into sleep. The second earliest reported dream of delivery was at age 7 2/12. A third girl dreamed of delivery shortly after having been operated on for appendicitis at the age of 11 1/12. Pregnancy dreams were reported by two girls, one first at the age of 14 4/12, and the other at the age of 16 3/12, after the girl had had three pregnancies—the only case of actual pregnancy in the group.

Intercourse dreams were reported by four girls. One girl reported, at age 13 0/12, that she would occasionally daydream of intercourse. She found these images to be "sickening" but admitted they did occur. At the same age, she also reported one nocturnal dream of intercourse but provided no details. At age 24 8/12 she reported occasional nocturnal intercourse dreams which left her "feeling sexy" upon awakening. At this same age she wrote that "my dreams are like a boy's wet dreams. I need them every day." A second girl had, at age 13 11/12, a daydream in which she tried to imagine what intercourse would be like; at age 22 4/12 she reported nocturnal dreams of intercourse accompanied by vaginal sensation with some residual sensations present upon awakening. A third girl reported dreaming of intercourse at age 23 4/12; though actual orgasm did not occur, full emotional involvement in the dream events did occur. The fourth girl, at age 21 3/12, reported that dreams of intercourse occurred once every

Table VII. Erotic and Pregnancy Imagery in Dreams and Daydreams ($N = 5$)[a, b]

Delivery	Intercourse	Pregnancy
	Nocturnal dreams	
WD, 6 6/12, following a stomach ache	WD, 13 0/12, no details	RB, 14 4/12, no details
RB, 7 2/12, no details	WD, 24 8/12, occur occasionally, wake up feeling "sexy"	FM, 16 3/12, recalled first two pregnancies
WL, 11 1/12, following an appendectomy	FM, 21 3/12, occur about every 2 months, wake up wishing partner was really there	
	WL, 22 4/12, several occasions, some vaginal sensation with residual sensation upon awakening	
	HD, 23 4/12, full emotion but no orgasm	
	Daydreams	
None reported	WD, 13 0/12, thoughts allowed to continue but found "sickening"	None reported
	WL, 13 11/12, imagines what intercourse would be like	

[a] Some patients represented more than once, some not at all.
[b] Patients listed by initials, with age when imagery was reported, and other details given.

two months. She would awaken regretting that the dream partner was not really there.

Perhaps because of the practical difficulty of obtaining continuous and frequent follow-up data on dreams, there was no discernible consistent progression of erotic and pregnancy dream content—though the initial dreams described by most of the girls were scary or spooky, with intercourse dreams coming last. Kissing and hugging in dreams appeared only infrequently, and dreams of weddings were usually concerned more with the pageantry of the occasion rather than with any romantic involvement of the dreamer. Despite the early onset of bodily readiness for sexual response, imagery of erotic stimulation and erotic arousal seldom occurred. Pregnancy and delivery dreams, recorded in four cases, were conspicuously devoid of erotic content. Precocious or extreme concern for the erotic was not noteworthy in any of the cases.

Boyfriends, Intercourse, Marriage, and Pregnancy

In the manner commonly associated with puberty, a progression from puppy love and crushes to full romantic and sexual involvement was observed. In their younger years, several girls named such TV, movie, and singing idols as the Video Ranger, Fabian, Tom Jones, and Jerry Lewis as their true loves. Giggling and shyness accompanied talk of romance and boyfriends. Romantic identification with the heroine in films was common.

Boyfriends were claimed by the girls beginning, in the earliest case, at age 7 2/12 (Table VIII). Revelations of a boyfriend were usually accompanied by a statement such

as, "but he doesn't know it yet." Casual boyfriendships were the forerunners of the first teenage crushes. The mentioning of a serious boyfriend, with the implication of meeting him sometimes and of having some emotional involvement, occurred, in the earliest case, at age 8 7/12. The first recorded full-blown falling-in-love experience occurred at age 18 3/12.

In addition to the actual ages recorded in Table VIII, several girls predicted the years between 13 and 19 as the best ones to begin dating. With regard to petting, no mention of participating in actual petting was made by any of the younger girls. One patient, at the age of 23 4/12, retrospectively expressed the opinion that over-the-clothes petting was acceptable beginning at age 12. The only other revealed form of sex play, exclusive of intercourse discussed below, came from a mother's complaint that her 11 7/12-year-old truant daughter had once come home with passion (suck) marks on her neck.

The younger girls, except the one who became pregnant at age 11, were quite strong in their prohibition of premarital intercourse, while the older girls were more permissive in their opinions, so long as the hypothetical couple had strong emotional ties. Premarital intercourse in young adulthood, no sooner than the age of 17, was subsequently admitted by four older girls. In each case the sexual partner had been or was a current lover or fiancé, rather than a casual pickup. This behavior can best be described as episodic monogamy rather than promiscuity. The patient who was first pregnant in the preteenage years lived in an urban Negro ghetto where early teenage pregnancies were culturally typical to a certain extent (Money, 1965). The four other Negro patients in this sample did not live in the ghetto culture and did not evidence precocious coital behavior.

Three patients, all told, had married by the time of this writing—at the ages of 21, 23, and 24, respectively. All three of these women regarded their marital sex lives as quite satisfactory. One indicated that orgasm was almost always attained. The others were not available in person for sufficiently detailed inquiry. One patient, unmarried, reported attaining orgasm, in fact multiple orgasm, "most of the time."

In the case of the only mother in our sample, her pregnancies occurred when she was 11, 13, and 14. Her parents kept the firstborn child for her and placed the later two for adoption. Each of the three fathers was known to the girl. Marriage was not considered in any case. At the age of 16 this girl was described as having the appearance of

Table VIII. Boyfriends, Intercourse, Marriage, and Motherhood: Earliest Age Reported ($N = 12$)[a]

Casual boyfriends	Serious boyfriends	Premarital intercourse	Marriage	Motherhood
7 2/12	8 7/12	11	21	11 11/12
7 6/12	10 6/12	17	23 7/12	
7 6/12	11 6/12	18	24	
8 10/12	16	20		
8 11/12		21		
10				

[a] Some patients represented in more than one category, some not at all.

a 25-year-old. As she had been temporarily lost to follow-up, she could not be given advice about birth control at the time of her pregnancies.

It is a popular misconception that precocious pregnancy often follows precocious puberty. For example, Hamburg and Lunde (1966) cite Reuben and Manning's (1922, 1923) papers and say that pregnancy among these girls is "fairly common." Reuben and Manning can hardly be credited with dealing exclusively with precocious puberty since they report cases of children up to 15 years of age. It is not precocious to be sexually mature at age 15, though it may be argued that in our society, at least, it is precocious to become pregnant and deliver by that age. Only 50 of the 84 cases of pregnancy reviewed by Reuben and Manning occurred when the mothers were 12 years of age or under, and only 30 cases when the mothers were 11 years of age or under. These data are without statistical meaning since the entire population of girls capable of and achieving vs. avoiding pregnancy at the ages given is unknown. Our data clearly show that, in cases of genuinely precocious physical maturation, it is not common, as Hamburg and Lunde imply, for precocious copulatory behavior and pregnancy to ensue.

Body Image: Reaction to Pubertal Changes

"When I was young, everyone thought I was older. Now I look younger and nobody believes my age" wrote one girl at the age of 25. In the early preteen years, the precocious child is aware that she is at least a head taller than her age mates, has breasts and pubic hair, and menstruates. When older, she is shorter than most of her age mates. For a brief period, while other girls are beginning puberty but before they surpass her staturally, she does not appear too different.

Table IX classifies the different types of reaction to precocious height in the early years. Two girls accented the positive value of their size in competitive sports. One of these girls, and one additional girl, underplayed their tallness by pointing out age mates of similar height. Four omitted mention of height and focused on obesity. Four in various ways indicated embarrassment suffered because of their bigness, as, for example, when one girl was questioned by her teacher in the classroom about her physical

Table IX. Reaction of Precocious Height ($N = 15$)

Accented the positive[a]	2
Made idealized comparisons[a]	2
Primary complaint of obesity	4
Embarrassed by excess height	4
Made no complaints	3
No information	1

[a] One girl both accented the positive and made idealized comparisons and is therefore included in both categories.

Table X. Reaction to Pubertal Signs and Body Development ($N = 15$)

	Breasts	Menses	Nudity and medical exams
Positive	5	11	1
Negative	7	2	5
No information	3	2	9

development. One other girl said: "It's hard to believe I am only eleven; I still don't understand it." Another, at 13, said, "I was never a little girl."

The presence of breasts was, in every case, the earliest sign of precocity noted, appearing in one case at birth, and at the latest by age 7. All of the girls were subject to teasing on account of their breasts, though in only seven cases (Table X) did teasing and embarrassment engender a negative attitude that outweighed positive womanly satisfaction. Teasing consisted of not only verbal mockery, but also sometimes touching and squeezing. The offenders were usually other children, though in one case the victim's own parent was involved in verbal teasing.

As compared with the visible insignia of breasts, menstruation, which could be concealed, evoked fewer negative responses (Table X). Adequate sex information and knowledge of menstrual hygiene had been provided to the majority of the girls prior to their first menstruation, and to all whose clinic visits predated menstrual onset. Only two girls expressed genuine concern over their first menstruation while the majority of the girls accepted menses very matter of factly. One girl cried, although she had known it would occur at any time. Another girl, who had not received any sex education prior to the first menses, recalled "I was confused. I thought I did something wrong." One other girl simply said "Grandmother, you know what you told me? Well, it happened." Some were undisturbed over menses but felt it to be "awkward" and disliked the inconvenience. Following adequate sex information, the majority of the present sample of precocious girls viewed menstruation neither with fear nor with eager anticipation. It was just another fact of life.

Reactions to nudity for medical photography and vaginal examinations were explicitly recorded in six cases. In the other nine cases, nudity was not an explicit issue. Unconcern over nudity for medical photography was overtly indicated once. In five cases—33% of the sample—reactions to nudity and vaginal examinations ranged from distress to extreme phobic avoidance. One girl, aged 8 4/12, refused to undress in the presence of anyone. Another girl, aged 6 11/12, refused to allow her mother to bathe her or her gynecologist-father to take nude photographs of her. Nude medical photography was a source of embarrassment and severe stress for one other girl, aged 7 1/12, who was also "disgusted" over her pediatrician's attempt to conduct a vaginal examination. Vaginal examinations and vaginal smear tests were responded to by two other girls, aged 4 6/12 and 6 7/12, as violently upsetting.

The origin of intense phobic reaction to nudity and vaginal examinations, when it occurs, has not been traced. When it does occur, however, it is so powerful that it may result in refusal, defiance, and determination to escape that completely negate the

physician's endeavors on the child's behalf. Such a reaction is a psychologic danger signal not to be taken lightly. Its resolution requires the collaboration of both the mother and the daughter in a program of case management. It may require that the child be examined by only a female physician, and the same one on each return visit. It also requires that the child be helped to comprehend why, whereas the doctor's words say that she is normal except for growing too fast, his actions convey the message that she is a curious creature, if not a freak, to be poked at, examined, X-rayed, and photographed. Children, like adults, are helped by understanding the rationale of what is done to them, and why, in a medical examination. Otherwise they are too susceptible to overconcern with their physicians' insistent attentiveness to their genitalia (see Hoffman, 1967).

DISCUSSION

The fifteen cases herein reported are exceptional in the annals of behavioral science, for they represent an experiment of nature that eventually will become impossible to replicate, as therapeutic technique for the regulation of idiopathic sexual precocity becomes perfected. Already, today, when a very young girl comes to the clinic with beginning puberty, the growth of breasts can be held in abeyance and the onset of menses postponed by pharmacologic treatment. It is only a matter of time before statural precocity also will become subject to regulation, by methods as yet undiscovered.

In sexual precocity, there is a discrepancy between physique age and chronologic age of a degree rarely encountered. In ordinary childhood development, the two ages synchronize and are matched by the various parameters of social and psychologic age. In precocity, social age is not automatically advanced, but it may become so if the precocious child mixes with older children. She is competent to do so by reason of her size, within the limits set by her capability to accelerate her own achievements to match those of children older and more socially advanced. In academic achievement, acceleration is facilitated by high IQ, which is not, however, an invariable accompaniment of physical precocity.

The gap between physique age and social age in the young and physically very precocious child is too great to be closed completely, since there is a limit to the speed with which social maturation can be accomplished. In the final analysis, there is no substitute for weeks, months, and years of accumulated experience. In consequence, there is inevitably a possibility that the precocious child will be adversely affected by knowing herself to be the one who is different. Individual life circumstances differentially affect the way this adversity is encountered. Some children cope well, some poorly, but the balance sheet appears to be in favor of those who cope successfully.

The lowering of self-esteem that derives from feeling different, when difference is equated with freakishness, accounts for the retardation in romantic and dating age, observed in some precocious girls, until well after they have reached the middle teenage years. They may have difficulty in accepting themselves as worthy of a boyfriend and husband, because of a nagging, unformulated doubt, lest he unmask a lurking freakishness in them, and reject them. This doubt is surmounted with the first successful love affair.

The correlation between physique age, or more specifically hormonal-physique age, and erotic age in precocious puberty is not a replica of what is found in normally timed puberty. The difference lies in the fact that much of the phenomenology of erotic expression at puberty incorporates stimuli released from the social environment, especially from the social environment created by one's own age group. The girl who is pubertal by the age of 6 simply does not have access to the complete world of the preteens and early teenagers.

It is quite possible that the behavior of a girl of 6 will seem to be almost unaffected by the fact that she is hormonally pubertal. She will be as dependent on her parents as are other 6-year-olds, and not engaged in the typical teenaged developmental task of developing autonomy and independence from home and parents. She may have had a run-of-the-mill kindergarten romance, and have graduated to the stage of bypassing boys, as she consolidates her female gender identity mostly in the company of her own sex. She will have no special tendency to exhibit either more or less than the normal amount of childhood sexual play for her age, including masturbatory play. If raised under the umbrella of the usual middle-class pruderies and taboos, then her sexual behavior may be nil. If exposed to a different cultural pattern, however, where childhood sexual play sometimes is frankly expressed, then her sexual behavior will probably be overt, like that of her age mates, from time to time. As she approaches the teenage years her romantic interests may be bashful and guarded, or she may be boy-crazy, the difference being attributable to the same factors as produce similar contrasts in girls of normal pubertal onset—except for the special factor of feeling freakish, already mentioned.

Erotic age in precocious puberty tends to follow chronologic age rather than physique age. However, erotic age is modulated also by the advancement of general social age, as the latter progresses to match physique instead of chronologic age. There seems to be no evidence that a postpubertal level of circulating sex hormones propels the pubertally precocious young girl into feelings and desires of a romantic or sexual nature that one associates with the teenage adolescent. In fact, one may infer that the central nervous system program that subserves falling in love and mating behavior is separate from that which subserves pituitary–ovarian function, and that the two are not synchronized for at least the earliest years of premature puberty. It is possible, however, that the program for love and mating begins to go into operation a couple of years earlier, more or less, in precocious than in normally timed puberty. Thus, it is possible that by age 10 a physically precocious girl might develop a romantic interest in a boy and even have a full-blown falling-in-love experience, whereas from ages 6 to 8 it would have been too early for such an event.

What holds for romantic and mating behavior probably also holds for maternalism. The issue here is complicated by the fact that maternalism is normally rehearsed rather intensely in the play and fantasy of the early and middle childhood years. This early preoccupation with maternalism may conceivably overlap with early actual motherhood in a physically precocious girl, though it seldom does. It is more likely that there will be a hiatus, and a big one, between the period of rehearsal and the period of actuality.

In precocious boys, there is some of the same asynchrony, as one sees in girls,

between the central nervous system programs subserving love and mating vs. pituitary–gonadal function. But precocious boys differ from precocious girls in that pubertal elevation of male sex hormone levels correlates, even at the youngest ages, with a change in genitopelvic sexual behavior. There are more erections than in hormonally prepubertal boys of like ages. There is likely to be more masturbation, and eventually ejaculation will appear at an early age. One infers from behavioral evidence, supplemented by the boy's own reports, an increased level of sexual urge, though variable in degree, at all ages and stages of behavioral development in the precocious boy. Parallel evidence seems to be missing in the early development of the precocious girl. The heightening of sexual urge in precocious boys does not mechanistically determine any one type of behavior but rather heightens or increases the behavior characteristic of the boy's developmental stage.

From the point of view of psychologic case management, idiopathic sexual precocity presents no insuperable problems. If the parents are well counseled at the outset, subsequent counseling may be as infrequent as once a year. It is wise, however, always to have an open telephone line, in case of unexpected need. It is wise, also, for each child to have a professional counselor, as well as her parents, for there are inevitably certain issues in every child's life that need the perspective, if not the professional expertise, of an outsider.

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